REMARKS

Reexamination of the above-mentioned application is hereby requested in view of the above amendments and remarks which follow.

The Examiner rejected claims 1 through 5 and 7-8 under 35 U.S.C. §103(a) as being unpatentable over Watanabe et al. in view of Hamai et al. (U.S. Patent 5,441,428) and further in view of DE 3629740. The Examiner indicated that Watanabe discloses a base spring 12 and backup spring 10. The Examiner indicated that the back-up spring 10 encloses the base spring 12 in a box-like manner with three walls and divided overlapping fourth wall. Once again, Applicants disagree with the characterization of Watanabe as given by the Examiner.

Rather, Applicants believe that the Watanabe terminal as shown in any of Figures 1 through 4 shows a one-piece terminal, not a socket consisting of a base spring and a backup spring. Watanabe shows nothing more than a simple terminal for contact to a male pin. A male pin is either circular or square in cross section. When a male is contacted, the pin is contacted on at least two sides thereof, in order to counter the forces applied by the resilient contact forces of the female contact. Thus, in Watanabe, some portion of the terminal must counter the force of a pin inserted against the resilient contact portion 12, and therefore uses the contact portion 13A. Watanabe even acknowledges this. In the specification, column 2, lines 56-57, Watanabe indicates that "a male terminal can be gripped between the resilient contact piece 12 and the projection 13A." Projection 13A is merely the other half of the contact which makes contact with the mating male terminal pin. Furthermore, Watanabe indicates that "reference numeral 10 denotes a rectangular, sleeve-shaped electrically contacting portion" (Column 2, lines 44-45).

As shown in Figure 4, Watanabe is stamped from a single sheet of material and folded into the configuration having a cross section of Figure 3. It is clear from Figure 3 that the contact parts are formed from reverse bent contact portion 12 in combination with the projection of 13a. Thus, there is no backing up of these spring parts as is provided by a discrete backup spring. Rather, Watanabe only shows a base spring, comprised of a resilient spring portion 12 and the counter contact portion 13A. It just so happens that the counter contact portion 13A resides on an opposing wall which the Examiner has mistakenly taken as a back up spring wall. However, nothing in Watanabe "backs up" the resilient contact portion 12. Thus, although the Examiner indicates that Watanabe shows a

back-up spring, but not a discrete back-up spring, Applicants believe that nothing in Watanabe discloses or suggests a back-up spring at all.

In an attempt to combine Watanabe with a discrete back-up spring, the Examiner combines Watanabe with Hamai. However, Hamai also does not show a back-up spring, either but merely teaches a contact. Hamai is actually quite similar to Watanabe having a resilient spring portion at 9, and a counter contact portion formed by upper walls 27, 29. Hamai does not show a discrete back-up spring, as item 28 (the portion characterized by the examiner as the back-up spring in Hamai) is integral with the base spring. What Hamai actually shows is a discrete spring terminal portion at 9.

The Examiner admits that Watanabe fails to disclose two lugs. Watanabe does not disclose or suggest a socket contact composed of a backup spring and a base spring, where the backup spring is secured by means of two lugs passing through recesses and being bent over wherein two wall sections overlap over the full length of the backup spring. In contrast to the Examiner's point of view, a skilled person would have had no reason to modify the base spring socket contact of Watanabe et al. in accordance with certain teaching shown in an additionally cited DE-740. According to Watanabe, Figures 5 and 6 disclose prior art according to which a projection 113a is formed at each of the two opposing edges of the upper wall 113. Thus, to avoid a deformation of the projections 113a (see column 4 of Watanabe), Watanabe provides for overlapping upper wall portions, where a projection 13b is engaged in an engaging hole 17, as shown in Figures 1 and 4 of Watanabe. Therefore, a skilled person has no reason for modifying this structure in view of DE-740.

Moreover, it would not be possible to modify the walls of Watanabe in the manner indicated by the Examiner. The upper wall of Watanabe, and more particularly, the portion 13A which extends downwardly therefrom, is a part of the contact as mentioned above. Thus modifying the contact portion of Watanabe would degrade the contact.

However, to better understand and to more clearly point the invention, Applicants have amended claim 1 to indicate that the base spring is comprised of at least two contact portions. Furthermore, the back-up spring then encloses the base spring, with the backup spring further comprising backup spring arms positioned proximate to the opposed contact portions in an overlying manner.

The Examiner also rejected claim 6 under 35 U.S.C. §103(a) as being unpatentable over Watanabe et al., in view of Hamai et al., DE-740 and further in view of Seko. Given

the fact that none of Watanabe, Hamai, et al. or Seko show discrete backup springs, it is not clear what the addition of Seko adds to the rejection under 35 U.S.C. §103(a). Rather, Seko shows a terminal cover 51 which overlaps the contact and carries the locking lance 20. However, the cover has no relation to backing up the contact spring arms 6, as shown in the cross sectional view of Figures 7 and 8.

The Examiner also rejected claim 9 under 35 U.S.C. §103(a) as being unpatentable over Watanabe in view of Hamai et al., DE-740 and further in view of Myer. The Examiner added Myer for its polarizing member 27, as this did not exist in any of the base references. Once again, given the fact that neither Watanabe nor Myer show discrete backup springs, it is not clear how the addition of a polarizing member to the base contact not to a backup spring obviates claim 9.

The Examiner also rejected claim 10 under 35 U.S.C. §103(a) as being unpatentable over Watanabe in view of Hamai and DE-740, and further in view of Egenolf. The Examiner indicated that Watanabe does not have the folding lugs on opposing second and third walls of the backup spring, but that Egenolf shows folding legs 77 and 79. Once again, given the fact that Watanabe does not show a discrete backup spring, it is not clear how the addition of the folding legs 77 and 79 to the base spring of Watanabe would obviate claim 10.

The Examiner also rejected claims 11 through 15 under 35 U.S.C. §103(a) as being unpatentable over Kakuta et al. in view of German '047. Once again, the Examiner mischaracterizes Kakuta as having a base spring and a box-like backup spring having a divided overlapped fourth wall. Kakuta does not show a contact having a discrete backup spring, but rather is almost identical to Watanabe, in that it has a reversely bent contact portion at 4, and an opposed contact portion formed in the upper and opposed wall. Notwithstanding that Kakuta does not have a backup spring at all, the Examiner points to German utility model '047 for two connecting points, that is, lugs 55 and 56. However, these lugs are on the bottom side of the backup spring as shown in Figure 23, rather than on two overlapping top walls. As shown in Figure 19, no top walls exist at all, rather the walls 21 and 22 are folded inwardly, rather than forming overlapping wall portions with two connecting lugs connecting the walls. Thus, even if the Examiner is correct, and that Kakuta together with German utility model '047 are combinable, they still do not obviate to the structure of claims 11 through 13.

The Examiner indicated that with respect to claim 14, Kakuta discloses the invention substantially as claimed except for recesses formed as U-shaped recesses. The Examiner indicated that it would have been obvious to modify the structure of Kakuta by including the U-shaped recess. Given the mischaracterization of Kakuta, it would not be obvious in light of Kakuta to modify any of Kakuta's structure to form a U-shaped recess in the backup spring wall.

However, to better understand and to more clearly point the invention, Applicants have amended claim 11 to indicate that the base spring is comprised of at least two contact portions. Furthermore, the back-up spring then encloses the base spring, with the backup spring further comprising backup spring arms positioned proximate to the opposed contact portions in an overlying manner. Thus, Applicants believe that claims 11-14 are now allowable.

The Examiner rejected claim 16 under 35 U.S.C. §103(a) as being unpatentable over Kakuta, German utility model '047, and further in view of Seko. As mentioned above, as neither Kakuta nor Seko show discrete backup springs, it is not clear how Seko's notches in combination with Kakuta and German utility model '047 would obviate claim 16.

The Examiner rejected claim 17 under 35 U.S.C. §103(a) as being unpatentable over Kakuta, Hamai, German utility model '047 in view of Buddrus et al. Once again, as Kakuta does not show a discrete backup spring, it is not clear how the addition of Buddrus having clamp 57 would obviate claim 17.

The Examiner rejected claim 18 under 35 U.S.C. §103(a) as being unpatentable over Kakuta et al., Hamai, German utility model '047, and further in view of DE-740. The Examiner indicated that it would be obvious to modify Kakuta to include the structured crank of DE-740. Given that Kakuta does not show a backup spring at all, the addition of DE-740 does not obviate claim 18.

The Examiner rejected claim 19 under 35 U.S.C. §103(a) as being unpatentable over Kakuta et al., Hamai, German utility model '047, and further in view of Myer. As Myer does not have a backup spring at all, the addition of Myer with Kakuta, where Kakuta does not have a backup spring, does not obviate claim 19.

The Examiner also rejected claim 20 under 35 U.S.C. §103(a) as being unpatentable over Kakuta et al. and German utility model '047, and further in view of

Egenolf. Since Kakuta does not have a backup spring, the addition of Egenolf to Kakuta could not possibly obviate claim 20.

For all of the above-mentioned amendments and remarks, Applicants believe that claims 1 through 20 are now in condition for allowance and respectfully request early passage thereof. If necessary to effect a timely response, please consider this paper a petition for extension of time sufficient to make this response timely and charge any fees due therefore, and charge any other fees due and credit any overpayment of fees to Baker & Daniels Deposit Account No. 02-0387 (72262.20009).

Respectfully submitted,

Eric J. Groen
Registration No. 32,230
Attorney for Applicant
BAKER & DANIELS
205 West Jefferson Blvd., Suite 250
South Bend, IN 46601
Tel: (574)234-4149
Fax: (574)239-1900

Enclosure: Postcard

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231

January 29, 2004
Date

Eric J. Groen, Reg. No. 32,230